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ABSTRACT

Changes in costs and returns for academic departments at the State University of New York at Oswego were studied over the three academic years and corresponding fiscal years of 1972-73 through 1974-75. The following questions were addressed: how much was spent within each department; what was the cost per student semester hour generated in each department; and in what ways have these costs changed over the last three years? It was found that 11.95 percent more money was spent by all academic departments in 1974-75 than was spent in 1972-73, and that the cost per student semester hour increased 1.62 percent. A significant gain in instructional productivity is evident. Some departments experienced increased unit costs but in a few cases their cost per student semester hour generated remained below the college average. It was found that fluctuations from year to year are quite marked and can change the productivity status of a given department in significant ways. Statistical tables are included. (SW)

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Changes in Department Expenditures over Three Recent Academic Years at SUNY, College at Oswego

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May, 1976

HE 011 494

Changes in Department Expenditures
over Three Recent Academic Years
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Problem:

Costs for instruction between departments vary in ways that are seldom easy to discern. College managers want to know if dollars spent by a given department yield a "reasonable" return in students taught.

A question about costs becomes more meaningful if it is expanded to include the dimension of change in costs and returns over a time period.

This study attempts to answer the following questions over the three academic years and their corresponding fiscal years of 1972-73 through 1974-75:

1. How much was spent within each department?

2. What was the cost per student semester hour generated in each department?

3. In what ways have these costs changed over the last three years?

Discussion:

Total dollar expenditures (DE) for each department for the fiscal years corresponding to the academic years of concern were calculated. Also, total student semester hours (SSH) per year that were generated were calculated. Then, the total dollars expended were divided by SSH for each department for each year. The resulting number is the unit cost (UC). In addition, the DE for each dean's office was divided by total SSH within his division to yield a UC for the dean's office in each division. These figures are in Table one.

In order to display the changes over time, we prepared Table two. Here we show the percent increase or decrease in DE and UC between academic years 1972-73 and 1974-75.

The first column of Table two shows that the College spent nearly 12% more for instructional costs last year than it did three years ago. However, the cost per SSH rose a mere 1.62% (col. two). That indicates that student/faculty ratios have been rising substantially. Economists might refer to this as increased productivity. Oswego has achieved increased productivity to the extent that UC only rose about one-eighth the increase in expenditure (1.62 divided by 11.95).

As one scans the figures in Table two, certain departments stand out. In general, where the increase in DE is greater than

the increase in UC increased productivity has occurred.

A few departments exhibit the opposite experience. For example, chemistry shows a DE increase of 15% but the UC increased even more (20.5%). Other departments which experienced a greater UC increase than DE increase are English, political science, audio visual, educational administration, education (elementary-secondary education with student teaching), reading, and vocational-technical education.

Some caution must be exercized in making judgments about these departments. Several of them experience substantial year-to-year changes in SSH. For instance, chemistry will this year show a marked increase in student workload which should lead to decided improvement in productivity. English may not show a similar increase in SSH. Political science may show a modest increase in SSH and thus at least hold steady in DE and UC.

From table one we are able to assess comparative costs between departments. By examining the UC columns (Expend ÷ SSH) we can see which departments are more or less expensive in dollars per SSH. Using the college average of $35.07 for last year, we can group departments in terms of above and below average as follows:

Above Average		At or Below Average	
Art	Zoology	Biology	Pol. Sci.
Chemistry	Audio-Vis.	Commun. Stds.	Psychology
For. Studies	Educ. Admin.	Computer Sci.	Soc./Anth.
HPE-Women	Education	Earth Sci.	Theatre
History	Ind. Arts	Economics	Bus. Admin.
Music	Reading	English	HPE-Men
Physics	SPC	Geography	Mathematics
	VTE		Philosophy

It is important to note that some departments which appeared to be short on productivity changes are, nevertheless, relatively efficient operations in terms of absolute DE and UC. In particular notice that English and political science spent $2.76 and $8.59 fewer dollars respectively for each SSH than the college average.

Conclusion:

We found that 11.95% more money was spent by all academic departments last year than was spent in 1972-73. But the cost per SSH increased a more 1.62%. This is clear evidence that instructional productivity has shown a significant gain.

We also found that some departments have experienced increased UC's but in a few cases their cost per SSH generated remains below the college average.

Finally, we discovered that fluctuations from year-to-year are quite marked and can change the productivity status of a given department in significant ways.

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TABLE 1

I. & D. H. Costs for Personnel Services, Temporary Service, OTPS, and Recharges

ARTS & SCIENCES	1974-75			1973-74			1972-73		
Department	SSH	Expend.	Expnd. ÷ SSH	SSH	Expend.	Expnd. ÷ SSH	SSH	Expend.	Expnd. ÷ SSH
Art	8116	$ 380,848	$46.93	8052	$ 360,154	$44.73	7930	$ 321,888	$40.59
Biology	5743	197,707	34.43	4120	186,248	45.21	4830	196,320	40.65
Chemistry	5792	242,086	41.80	6519	241,280	37.01	6194	205,775	33.22
Commun. Studies	8254	193,143	23.40	7117	225,147	31.64	8595	246,761	28.71
Computer Science	6004	131,609	21.92	5728	109,002	19.03	3993	110,550	27.69
Earth Science	7896	224,938	28.49	7269	209,768	28.86	6870	212,522	30.93
Economics	6355	115,934	18.24	4879	98,613	20.21	4011	86,793	21.64
English	14,944	482,865	32.31	15,872	461,728	29.09	15,266	429,169	28.11
*Foreign Studies	11,754	511,111	43.48	10,973	472,207	43.03	8822	428,420	48.56
Geography	4359	107,074	24.56	4001	112,572	28.14	3914	109,439	27.96
HPE-Men	5842	205,003	35.09	4752	195,581	41.16	3409	191,830	56.27
HPE-Women	2558	148,440	58.03	2704	166,936	61.74	2411	159,567	66.18
History	12,176	438,534	36.02	11,721	373,656	31.88	11,756	369,124	31.40
Mathematics	12,608	417,679	33.13	11,426	403,783	35.34	10,011	384,165	38.37
Music	5945	278,534	46.85	5807	257,007	44.26	5576	248,100	44.49
Philosophy	5617	171,425	30.52	5146	164,688	32.00	4957	164,130	33.11
Physics	4440	186,583	42.02	3973	175,457	44.16	3092	164,193	53.10
Political Sci.	6956	184,189	26.48	7708	176,997	22.96	7555	152,548	20.19
Psychology	19,376	543,222	28.04	17,667	543,620	30.77	17,443	509,925	29.23
Sociol./Anthro.	16,945	412,967	24.37	16,363	374,802	22.91	15,973	331,072	20.73
Theatre	3829	117,385	30.66	3761	64,613	17.18	N.A.	N.A.	N.A.
Zoology	4947	191,100	38.63	6115	183,162	29.95	4338	169,164	39.00
Dean's Office	180,457	118,238	.66	171,687	105,660	.62	156,946	60,561	.39
DIVISION TOTAL	180,457	$5,882,376	$32.60	171,687	$5,557,025	$32.37	156,946	$5,191,455	$33.08

* Includes Mod. Lang. Lab and Linguistics

I. & D. R. Costs (cont'd.)

PROF. STUDIES	1974-75			1973-74			1972-73		
Department	SSH	Expend.	Expnd. ÷ SSH	SSH	Expend.	Expnd. ÷ SSH	SSH	Expend.	Expnd. ÷ SSH
AV Comm. & Tech.	3135	$ 124,985	$39.87	2611	$ 110,821	$42.44	3327	$ 97,615	$29.34
Business Admin.	7481	115,931	15.50	6559	53,972	8.23	4068	37,424	9.20
Education Admin.	1192	87,515	73.42	1381	74,030	53.61	1311	23,622	18.02
EE & SE + St. Tch.	21,519	888,228	41.30	19,903	882,785	44.35	23,172	900,301	38.85
Industrial Arts	15,624	737,029	47.17	14,883	709,450	47.67	13,610	678,400	49.85
Reading	2108	94,984	45.06	2496	103,559	41.49	2494	26,584	10.66
SPC	1849	101,169	54.72	2055	97,037	47.22	1819	100,740	55.38
Voc-Tech. Ed.	1452	202,850	139.70	3260	200,400	61.47	3408	195,121	57.25
Dean's Office	54,350	94,053	1.73	53,148	93,746	1.76	53,207	53,520	1.01
DIVISION TOTAL	54,350	$2,353,191	$43.30	53,148	$2,232,054	$42.00	53,207	$2,059,807	$38.71
COLLEGE TOTAL	234,815	$8,235,567	$35.07	224,835	$7,789,079	$34.64	210,153	$7,251,262	$34.50

TABLE 2

Percentage Changes in Unit Costs
per Student Semester Hour and in Total
Expenditures between Academic Years 1973 and 1975

ARTS & SCIENCES Department	1973-1975 Expend. Change	Unit Cost Change
Art	15.5%	13.5%
Biology	0.7	-18.1
Chemistry	15.0	20.5
Commun. Studies*	20.5	-11.7
Computer Sci.	16.0	-26.3
Earth Science	5.5	- 8.6
Economics	25.1	-18.6
English	11.1	13.0
For. Studies	16.2	-11.7
Geography	- 2.2	-13.8
HPE-Men	6.4	-60.4
HPE-Women	- 7.5	-14.0
History	15.8	12.8
Mathematics	8.0	-15.8
Music	10.9	5.0
Philosophy	4.3	- 8.5
Physics	12.0	-26.4
Political Sci.	17.2	23.8
Psychology	6.1	- 4.2
Socio./Anthro.	19.9	14.9
Theatre	N.A.	N.A.
Zoology	11.5	- 1.0
DIVISION TOTAL	11.7	- 1.5

PROF. STUDIES Department	1973-1975 Expend. Change	Unit Cost Change
AV Comm. & Tech.	21.9%	26.4%
Business Admin.	67.7	40.6
Education Admin.	73.0	75.5
Education**	- 1.3	5.9
Industrial Arts	7.9	- 5.7
Reading	72.0	76.3
SPC	0.4	- 1.2
VTE	3.8	59.0
DIVISION TOTAL	12.5	10.9
COLLEGE TOTAL	11.95	1.62

* Sp. & Th. vs Comm. Stds. plus Theatre
** El. Ed., Sec. Ed., Student Tchng.